

California Arbovirus Surveillance Bulletin #18

Week 25 Friday, June 20, 2014



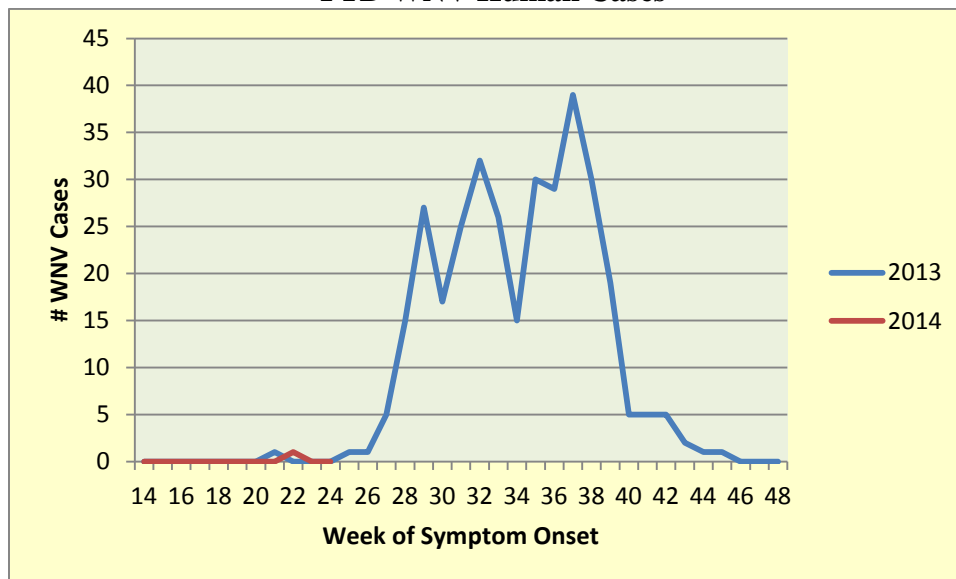
WEEKLY UPDATE

Humans

The first two human infections with West Nile virus (WNV) this year have been reported from Contra Costa and San Joaquin counties.

A resident of Contra Costa County developed symptoms compatible with WNV neuroinvasive disease in late May; the individual has recovered. In addition, one WNV-positive blood donor was reported from San Joaquin County. At this time last year, one human case of WNV had been reported from Sacramento County.

YTD WNV Human Cases



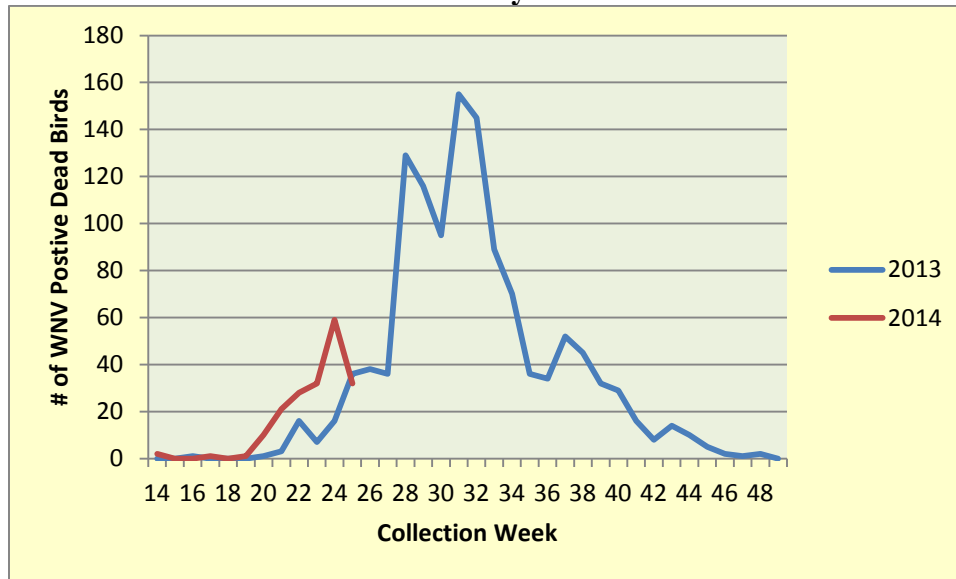
California Arbovirus Surveillance Bulletin #18

Week 25 Friday, June 20, 2014

Dead Birds

A total of 52 WNV positive dead birds were reported this week from the following 10 counties: Contra Costa (2), Fresno (1), Marin (1), Sacramento (9), San Joaquin (1), Santa Clara (28), Stanislaus (3), Sutter (1), Tulare (3), and Yolo (3). **This is the first detection of WNV activity in Marin and Sutter counties this year.** To date this year, 196 birds have tested positive for WNV from 17 counties. At this time last year, 37 WNV positive dead birds had been detected in 15 counties.

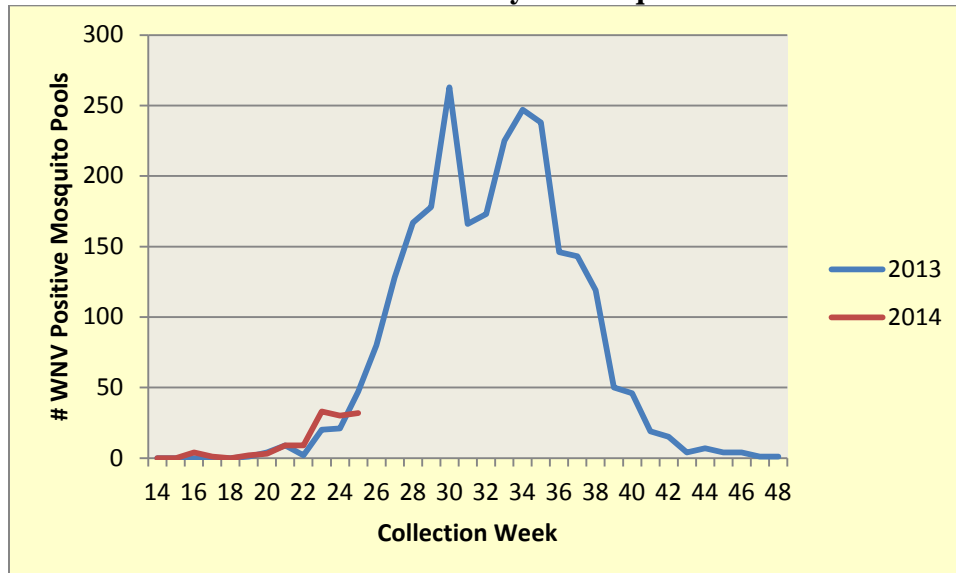
YTD WNV Activity in Dead Birds



Mosquito Pools

This week, 38 WNV positive mosquito pools were reported from the following 12 counties: Fresno (1), Kern (1), Sacramento (7), San Bernardino (1), San Joaquin (8), San Mateo (1), Santa Clara (2), Stanislaus (1), Sutter (1), Tulare (9), Yolo (5), and Yuba (1). **These are the first WNV positive mosquito pools reported from Kern, San Mateo, Sutter, and Yuba counties this year.** In 2014, 123 mosquito pools from 18 counties have tested positive for WNV. At this time last year, 70 WNV positive mosquito pools had been reported from 10 counties.

YTD WNV Activity in Mosquitoes



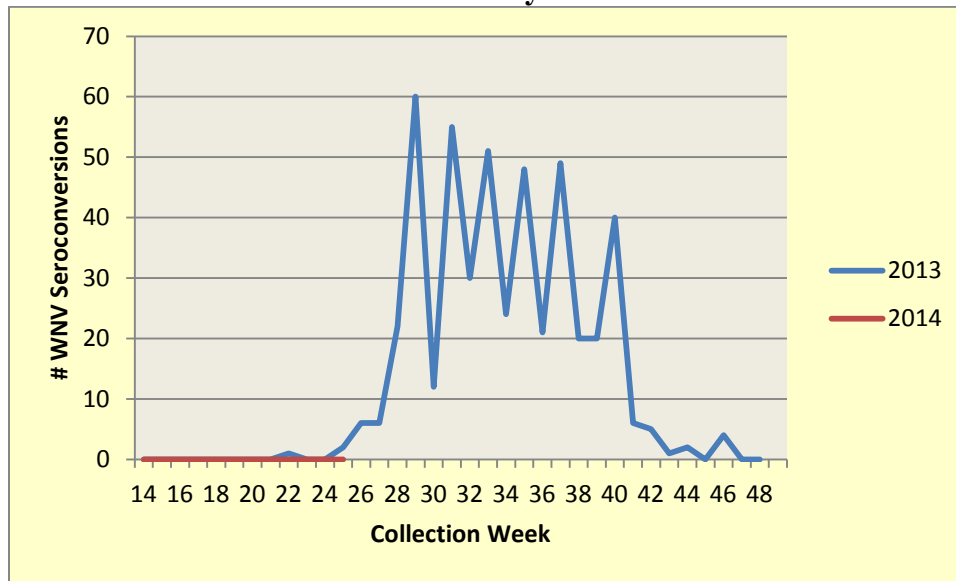
California Arbovirus Surveillance Bulletin #18

Week 25 Friday, June 20, 2014

Sentinel Chickens

No seroconversions were reported this week. To date this year, one WNV positive chicken has been reported from Los Angeles County. At this time last year, one WNV seroconversion had been reported from Los Angeles County.

YTD WNV Activity in Chickens



California Arbovirus Surveillance Bulletin #18

Week 25 Friday, June 20, 2014

YTD Activity by Element and County, 2014				
County	Humans*	Dead Birds	Mosquito Pools	Sentinel Chickens
Contra Costa	1	6		
Fresno		2	6	
Kern			1	
Lake		3	2	
Los Angeles		2	2	1
Madera		2		
Marin		1		
Orange		8	3	
Placer		1	1	
Sacramento		21	22	
San Bernardino			8	
San Joaquin		2	25	
San Mateo		1	1	
Santa Clara		112	9	
Solano		4	2	
Sonoma			2	
Stanislaus		6	4	
Sutter		1	1	
Tulare		20	27	
Yolo		4	6	
Yuba			1	
Totals	1	196	123	1

**Total does not include asymptomatic infections*

2013 & 2014 YTD West Nile Virus Comparisons		
	2013	2014
Total # Dead Bird Reports	4,832	3,909
# Positive Counties	19	21
# Human Cases	1	1
# Positive Dead Birds / # Tested	37 / 947	196 / 756
# Positive Mosquito Pools / # Tested	70 / 11,150	123 / 7,078
# Seroconversions / # Tested	1 / 5,680	1 / 5,028

California Arbovirus Surveillance Bulletin #18

Week 25 Friday, June 20, 2014

TESTING SUMMARIES

Humans

		WNV		WEEV		SLEV	
		Local	Imported	Local	Imported	Local	Imported
Human Cases	Week	1	0	0	0	0	0
	YTD	1	0	0	0	0	0

Dead Birds

		Number Tested	WNV Positive
Dead Birds	Week	96	52
	YTD	756	196

Chickens & Mosquitoes

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	670	0	0	0
	YTD	5,028	1	0	0
Mosquito Pools	Week	801	38	0	0
	YTD	7,078	123	0	0

NEW POSITIVES

Dead Birds

County	Agency	City	Zip	Species	Reported	Virus	Method
Contra Costa	Contra Costa MVCD	Oakley	94561	American Crow	6/17/2014	WNV	RAMP
Contra Costa	Contra Costa MVCD	Oakley	94561	American Crow	6/17/2014	WNV	RAMP
Fresno	Consolidated MAD	Kingsburg	93631	American Crow	5/21/2014	WNV	RAMP
Marin	Marin-Sonoma MVCD	Novato	94945	American Crow	6/8/2014	WNV	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Carmichael	95608	Western Scrub-Jay	6/15/2014	WNV	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Carmichael	95608	Western Scrub-Jay	6/16/2014	WNV	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Isleton	95641	American Crow	6/15/2014	WNV	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Rancho Cordova	95742	House Finch	6/16/2014	WNV	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Sacramento	95817	American Crow	6/15/2014	WNV	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Sacramento	95820	Western Scrub-Jay	6/17/2014	WNV	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Sacramento	95823	House Sparrow	6/16/2014	WNV	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Sacramento	95824	American Robin	6/15/2014	WNV	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Sacramento	95828	American Crow	6/17/2014	WNV	RT-PCR
San Joaquin	San Joaquin Co MVCD	Stockton	95205	Western Scrub-Jay	6/11/2014	WNV	RT-PCR

California Arbovirus Surveillance Bulletin #18

Week 25 Friday, June 20, 2014

Santa Clara	Santa Clara Co VCD	Sunnyvale	94087	American Crow	6/17/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	Sunnyvale	94087	American Crow	6/17/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	Sunnyvale	94087	American Crow	6/16/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	Sunnyvale	94087	American Crow	6/12/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	Sunnyvale	94087	American Crow	6/16/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	Sunnyvale	94087	Common Raven	6/17/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	Sunnyvale	94087	American Crow	6/16/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	Sunnyvale	94087	American Crow	6/13/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	Sunnyvale	94087	American Crow	6/16/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	Campbell	95008	American Crow	6/15/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	Campbell	95008	American Crow	6/11/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	Campbell	95008	American Crow	6/12/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	Campbell	95008	American Crow	6/13/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	Campbell	95008	American Crow	6/15/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	Santa Clara	95051	American Crow	6/13/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	San Jose	95117	American Crow	6/14/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	San Jose	95117	American Crow	6/13/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	San Jose	95117	American Crow	6/17/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	San Jose	95117	American Crow	6/17/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	San Jose	95124	American Coot	6/16/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	San Jose	95125	Common Raven	6/16/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	San Jose	95125	American Crow	6/16/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	San Jose	95125	American Crow	6/17/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	San Jose	95125	American Crow	6/16/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	San Jose	95129	American Crow	6/16/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	San Jose	95129	American Crow	6/13/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	San Jose	95130	American Crow	6/12/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	San Jose	95130	American Crow	6/12/2014	WNV	RT-PCR
Stanislaus	East Side MAD	Modesto	95350	Western Scrub-Jay	6/9/2014	WNV	RT-PCR
Stanislaus	East Side MAD	Modesto	95350	Western Scrub-Jay	6/9/2014	WNV	RT-PCR
Stanislaus	Turlock MAD	Turlock	95382	Western Scrub-Jay	6/16/2014	WNV	RT-PCR
Sutter	Sutter-Yuba MVCD	Yuba City	95993	American Crow	6/11/2014	WNV	RT-PCR
Tulare	Delta VCD	Visalia	93277	American Crow	6/13/2014	WNV	RT-PCR
Tulare	Delta VCD	Visalia	93277	American Crow	6/13/2014	WNV	RT-PCR
Tulare	Delta VCD	Visalia	93277	Western Scrub-Jay	6/12/2014	WNV	RT-PCR
Yolo	Sacramento-Yolo MVCD	Davis	95618	American Crow	6/16/2014	WNV	RT-PCR
Yolo	Sacramento-Yolo MVCD	Davis	95618	American Crow	6/15/2014	WNV	RT-PCR
Yolo	Sacramento-Yolo MVCD	West Sacramento	95691	Brewer's Blackbird	6/16/2014	WNV	RT-PCR

Mosquitoes

County	Site Code	Pool #	Species	City	# in Pool	Trap	Collected	Virus	Method
Fresno	CNSL1695	34	Cx. quinquefasciatus	Fresno	22	GRVD	6/17/2014	WNV	RTPCR
Kern	KERN2027	117	Cx. tarsalis	Bakersfield	30	CO2	6/11/2014	WNV	RTPCR
Sacramento	SAYO204017	1465	Cx. pipiens	Citrus Heights	38	GRVD	6/17/2014	WNV	RTPCR
Sacramento	SAYO204035	1495	Cx. pipiens	Sacramento	15	GRVD	6/17/2014	WNV	RTPCR
Sacramento	SAYO204042	1479	Cx. pipiens	Carmichael	6	GRVD	6/17/2014	WNV	RTPCR
Sacramento	SAYO214013	1513	Cx. pipiens	Carmichael	11	GRVD	6/17/2014	WNV	RTPCR
Sacramento	SAYO243012	1492	Cx. pipiens	Elk Grove	6	GRVD	6/17/2014	WNV	RTPCR
Sacramento	SAYO261002	1457	Cx. tarsalis	Isleton	50	CO2	6/17/2014	WNV	RTPCR
Sacramento	SAYO261004	1455	Cx. pipiens	Isleton	9	CO2	6/17/2014	WNV	RTPCR
San Bernardino	WVAL5005	589	Cx. quinquefasciatus	Rancho Cucamonga	13	GRVD	6/17/2014	WNV	RTPCR

California Arbovirus Surveillance Bulletin #18

Week 25 Friday, June 20, 2014

San Joaquin	SJCM7023	587	Cx. pipiens	Stockton	3	GRVD	6/17/2014	WNV	RTPCR
San Joaquin	SJCM8026	528	Cx. tarsalis	Stockton	50	CO2	6/17/2014	WNV	RTPCR
San Joaquin	SJCM8041	541	Cx. tarsalis	Lodi	14	CO2	6/17/2014	WNV	RTPCR
San Joaquin	SJCM8049	561	Cx. pipiens	Stockton	33	CO2	6/17/2014	WNV	RTPCR
San Joaquin	SJCM8076	558	Cx. pipiens	Stockton	14	CO2	6/17/2014	WNV	RTPCR
San Joaquin	SJCM8078	544	Cx. pipiens	Stockton	7	CO2	6/17/2014	WNV	RTPCR
San Joaquin	SJCM8100	555	Cx. tarsalis	Tracy	13	CO2	6/17/2014	WNV	RTPCR
San Joaquin	SJCM8100	556	Cx. pipiens	Tracy	14	CO2	6/17/2014	WNV	RTPCR
San Mateo	SANM286	1	Cx. pipiens	San Mateo	30	CO2	6/18/2014	WNV	RTPCR
Santa Clara	STCL2607	5241	Cx. tarsalis	Sunnyvale	1	CO2	6/13/2014	WNV	RTPCR
Santa Clara	STCL365	5226	Cx. pipiens	Na	3	CO2	6/11/2014	WNV	RTPCR
Stanislaus	TRLK1313	154	Cx. pipiens	Turlock	50	CO2	6/17/2014	WNV	RTPCR
Sutter	SUYA0044	60	Cx. tarsalis	Pleasant Grove	32	REST	6/16/2014	WNV	RTPCR
Tulare	DLTA70529	235	Cx. quinquefasciatus	Visalia	7	GRVD	6/12/2014	WNV	RTPCR
Tulare	DLTA8434	248	Cx. quinquefasciatus	Visalia	42	GRVD	6/17/2014	WNV	RTPCR
Tulare	DLTA8434	249	Cx. quinquefasciatus	Visalia	24	GRVD	6/17/2014	WNV	RTPCR
Tulare	DLTA8434	250	Cx. quinquefasciatus	Visalia	27	GRVD	6/17/2014	WNV	RTPCR
Tulare	DLTA8435	251	Cx. quinquefasciatus	Visalia	21	GRVD	6/17/2014	WNV	RTPCR
Tulare	DLTA8435	252	Cx. quinquefasciatus	Visalia	20	GRVD	6/17/2014	WNV	RTPCR
Tulare	DLTA8435	254	Cx. quinquefasciatus	Visalia	17	GRVD	6/17/2014	WNV	RTPCR
Tulare	DLTA8520	226	Cx. quinquefasciatus	Visalia	17	GRVD	6/12/2014	WNV	RTPCR
Tulare	DLTA8521	232	Cx. quinquefasciatus	Visalia	16	GRVD	6/12/2014	WNV	RTPCR
Yolo	SAYO125011	1611	Cx. pipiens	Woodland	9	GRVD	6/19/2014	WNV	RTPCR
Yolo	SAYO136010	1653	Cx. tarsalis	Woodland	50	CO2	6/19/2014	WNV	RTPCR
Yolo	SAYO136010	1660	Cx. pipiens	Woodland	36	GRVD	6/19/2014	WNV	RTPCR
Yolo	SAYO143009	1651	Cx. pipiens	Winters	16	CO2	6/19/2014	WNV	RTPCR
Yolo	SAYO146002	1649	Cx. pipiens	Davis	22	GRVD	6/19/2014	WNV	RTPCR
Yuba	SUYA0097	61	Cx. tarsalis	Marysville	19	REST	6/16/2014	WNV	RTPCR

Test Protocols

Humans:

Specimens are tested by local laboratories with an IgM or IgG immunofluorescent assay (IFA) and/or an IgM enzyme immunoassay (EIA). Specimens with inconclusive results are forwarded to the California Department of Public Health Viral and Rickettsial Disease Laboratory (VRDL) for further testing or confirmation.

Dead Birds

Oral swab samples from corvids are collected onto RNase cards and tested by the UC Davis Center for Vectorborne Diseases (CVEC) for West Nile virus by the singleplex RT-PCR Taqman assay and confirmed with a second primer set.

Sentinel Chickens:

Dried blood spot specimens from sentinel chickens are submitted to the California Department of Public Health Vector-Borne Disease Laboratory and tested for the presence of antibodies to West Nile, western equine encephalomyelitis (WEEV), and St. Louis encephalitis (SLEV) viruses by EIA and IFA. Positive samples are confirmed by western-blot or PRNT.

Mosquito Pools:

California Arbovirus Surveillance Bulletin #18

Week 25 Friday, June 20, 2014

Mosquito pools are submitted to CVEC and screened for WEEV, SLEV, and WNV viral RNA using a Taqman multiplex RT-PCR. CVEC will cease confirmation testing on PCR-positive pools of *Cx. tarsalis* and *Cx. quinquefasciatus* but will continue to confirm multiplex PCR-positive results for other mosquito species using singleplex RT-PCR.

Prepared by the Vector-Borne Disease Section (Infectious Diseases Branch), California Department of Public Health, 850 Marina Bay Parkway, Richmond, CA 94804. Questions concerning this bulletin should be addressed to Tina Feiszli by phone (510) 412-6253 or email: tina.feiszli@cdph.ca.gov.

Website Information: For updated information on WNV in California, please visit the California WNV website, www.westnile.ca.gov, or the California Vectorborne Disease Surveillance System website, www.calsurv.org. For national information on WNV and other arboviruses, please visit the CDC website, www.cdc.gov, and the USGS website, www.westnilemaps.usgs.gov